

INDEX TO VOLUME FOUR.

- Abdominal sense organs, 690.
Acalypha Virginica, 355.
 Acceleration, theory of, 232.
Accipiter, 711.
Acer, 214.
Achorion microsporon, 343.
Acidalia, 229.
Acidaspis Whittfieldi, 568.
Acontia metallica, 229.
Actias Luna, malformed, 52.
Actinaria, 488.
Agarum Turneri, 295.
Agaricus muscarius, 344.
Alaria esculenta, 235.
 Alaska, 439.
 Albino rodents, 58.
 Albino snow bird, 376.
 Albino barn swallow, 127.
 Albino woodchuck, 252.
Aleyonaria, 488.
Aleurodes, 686.
Allegbanicus, fauna of, 392.
Aloua prae-labilis, 115.
 Alpine flowers, 521.
 Amazon, 358, 763.
Ambloplites pomotis, 102.
 America, ancient lakes of, 641.
Amiurus, 390.
Ammicola grana, 58.
Ampelopsis, 414.
Amphiroa, 288.
Anas boschas, 49.
Anas obscura, 49.
 Andes, 358.
Andigena, 712.
Androgynous inflorescence, 46, 353.
Anemones, sea, two-mouthed, 256.
Anguilla, 391.
Anomis xylina, 52.
Anser, 374.
 Ant lion, 705.
Apeltes quadracus, 115.
Aphroderus Sayanus, 105, 107, 719.
 Apple-bud moth, 684.
 Aquarium, fresh water, 23.
Arcella, 379.
 Archaeological impostures, 319.
 Archaeology, 445.
 Arctic flora, 125.
Arctomys monax, 252.
 Areas of preservation, 44.
Arion fuscus, 179.
 Army worm of the South, 52.
Asperococcus, 295.
Aspidiotus, 685.
Asterocerus, 253.
Asterophyllites, 479.
 Auk, great, 37.
 Auk, 369.
Aythya Americana, 49.
Aythya vallisneria, 49.
Baphetes minor, 190.
 Barberry, 438.
 Barbet, 712.
 Bark lice, 686.
 Bass, 693.
Bathybius, 50.
Batrachia, skull of, 595.
 Bean weevil, 685.
 Bear, 431.
 Beaver, extinct, 504.
 Bees, fertilization of *salvia* by, 689.
Belone longirostris, 105.
Bernicia, 369.
Bidens chrysanthemoides, 43, 352.
Bidens frondosa, 43.
Bignonia, 313, 411.
 Billfish, 529.
 Binocular microscope, 573, 633, 695.
 Birds, classification of, 746.
 Birds, flight of, 439.
 Birds of Alaska, 397.
 Birds of Massachusetts, 365.
 Blackbird, 52, 546.
 Blood, human, 704.
 Bluefish, 519.
Boarunia, 229.
Boleosoma Olmstedii, 113.
 Bone caves of Gibraltar, 255.
Bootherium, 457.
 Borers, 588.
 Boston, geology of, 238.
Botrytis, 343.
Botrys, 229, 685.
 Boulder trains, 555.
Brachiopoda, 510.
Brachiopoda, position of, 314.
Brachygalia, 713.
 Brazil, carboniferous fossils of, 694.
 Brazil, geology of, 128.
 Brazilian crustacea, 435.
Bruchus, 685.
Bryopsis, 285.
Bryttus chatodon, 102, 106.
Bryttus obesus, 102.
Bucephala albeola, 49.
Bucephala Americana, 49.
Budytes, 370.
 Bunt, 342.
 Bunting, 546.
 Barbot, 251.
 Bur-grass, 689.
 Bur-marigold, 43.
 Butcher bird, 545.
 Butterflies, 700.
 Buzzard, 375, 376, 702.
Byturus unicolor, 685.
 Cabbage butterfly, 576, 612.
Calamites, 479.
 California, resources of, 708.
 California, Indians of, 129.
Calidras, 761.
Calligenathus, 738.
Callithamnion, 292.
 Cambarus, 617.
 Canisocia, 488.
 Carboniferous fossils, 190.
 Carboniferous fossils of Brazil, 694.
Castoroides Ohioensis, 504.
Catarractes antiquus, 311.

- Cat-fish, 694.
 Catostomus, 360.
 Catskill group, 563.
 Caulopteris, 489.
 Cedar bird, 682.
 Cenchrus, 689.
 Centurus, 538.
 Cephalaspis, 191.
 Ceramiales, 292.
 Cervus Virginianus, 188.
 Chetomorpha, 282.
 Chetura, 713.
 Chalchihuitis, 171.
 Chamaerops, 559.
 Cherry tortrix, 685.
 Chimborazo, 358.
 Chinese, 630.
 Chion, 594.
 Chipmunk, 58.
 Chlorosis, 125.
 Chondropsis Bailevana, 291.
 Chondrus crispus, 290.
 Chorda filum, 294.
 Chrysanthemum, 392.
 Chub, 110.
 Circus Hudsonius, 377.
 Clathrus, 319.
 Clematis, 408.
 Climate of drift period, 466.
 Clupea elongata, 520.
 Clymenia, 232.
 Cnidaria, 488.
 Cobaea, 412.
 Coccothrus, 767.
 Cock of the Rock, 715.
 Cockroach, sense organs of, 620.
 Cod, 516.
 Codfish, 116.
 Cœlodasya biguttatus, 229.
 Collema, 668.
 Collyrio, 545.
 Colorado, geology of, 119.
 Colorado Plateau, 650.
 Colpocephalum liri, 96.
 Compass plant, 495, 580.
 Compressor, clinical, 574.
 Compsidia, 588.
 Condor, 495.
 Conferva agagopila, 280.
 Conferva flavescens, 279.
 Conifera, leaves of, 44.
 Connecticut, ancient reptiles of, 444.
 Copal, 590.
 Coralina officinalis, 287.
 Corals, 488.
 Corals, development of, 39.
 Corn weevil, 686.
 Corvina, 693.
 Corydalis, 412.
 Cow bird, 58.
 Crabs, 615.
 Crabs, dimorphism in, 616.
 Crab, Horseshoe, 257, 498.
 Crab, King, 257, 754.
 Cranberry worms, 685.
 Cranium, 505, 629.
 Crawfish, 616.
 Crepidula, 59.
 Cretaceous birds, 310.
 Cretaceous fishes, 695.
 Crocodile in Florida, 54.
 Croker, 694.
 Crustacea, 435.
 Crustacea, dimorphism in, 617.
 Cyathiscus, 395.
 Cyclopteris, 480.
 Cyclostigma, 478.
 Cyprinus atomaculatus, 111.
 Dadoxylon, 481.
 Dafia acuta, 49.
 Daisy, 392.
 Dakota, extinct mammals of, 307.
 Darter, 113, 114.
 Dasya elegans, 291.
 Deer, 442, 765.
 Deer, spike horned, 188, 762.
 Delesseria, 201.
 Delta of Mississippi, 638.
 Dendrocygna fulva, 126.
 Dendroica, 543, 714.
 Derivation, 230.
 Desmarestia aculeata, 294.
 Desmognathus, 396.
 Devonian fossils, 190.
 Devonian plants, 474.
 Dialysis, 373.
 Diatoms, 573, 646.
 Diglossa, 715.
 Dimorphism, 616.
 Dimorphism in Acalephs, 55.
 Dimorphism in worms, 55.
 Dimorphis grandis, 254.
 Dinosauria, 59.
 Dinotherium, 379.
 Discina, 493.
 Doceoglossa, 361.
 Docophorus buteonis, 93.
 Docophorus hamatus, 94.
 Dog, prairie, 376.
 Dolium melanostoma, 59.
 Dorosoma cepedianum, 109.
 Double headed snake, 375.
 Dragon fly, malformed, 51.
 Dredging, deep sea, 464, 744.
 Dredging, deep sea, in the Gulf stream, 38.
 Drift Epoch, 451.
 Drift Epoch, climate of, 466.
 Dryopteris, 229.
 Dry rot, 351.
 Ducks, 49, 123, 548.
 Duck weed, 311.
 Eagle, Washington, 524.
 Earthquakes, 118.
 Easter Island, images in, 381.
 Echinocystis, 413.
 Eel, 391.
 Eel pout, 251.
 Elacate, 694.
 Elk, 394.
 Elm borer, 588.
 Elymus hystrix, 354.
 Embryology of animals, 90.
 Embryology of articulates, 122.
 Embryo of louse, 89.
 Empidonax, 539.
 Enneacanthus, 386.
 Entomology, economical, 610.
 Ephemeris, malformed, 52.
 Equator, glacial epoch at, 566.
 Ereunetes pusillus, 303.
 Ergot, 342.
 Erian formation, 475.
 Eskimo language, 561.
 Esquimo, 433.
 Eupatorium, 354.
 Euphonia, 714.
 Euspiza, 546.
 Eustixis pupula, 229.
 Falco, 398, 711.
 Falconry, 74.
 Fasciation in plants, 511.
 Fauna, alterations in, 100.

- Fauna of the Alleghanies, 392.
 Fauna of Lake Michigan, 403.
 Ferns, 121.
 Fertilization of plants, 126.
 Fertilization of salvia, 689.
 Ficus, 417.
 Fish, 99, 127.
 Fish culture, 601.
 Fishes, fossil, 635.
 Fishes of New Jersey, 99, 717.
 Fishes of Florida, 635.
 Fishes, skull of, 565.
 Flesh fly, 127.
 Flight of birds and insects, 439.
 Flora, arctic, 127.
 Floral organs, 125.
 Flora of Humboldt Valley, 27.
 Flora of prairies, 577.
 Flora of shore of Lake Michigan, 353.
 Florida, deep sea dredging off, 38.
 Florida, fishes of, 633.
 Florida, shells of, 585.
 Flowers, alpine, 521.
 Flowers, fertilized by insects, 242.
 Flowers, transformations of parts of, 45.
 Fly agaric, 344.
 Fly, black, 435.
 Fossil birds, 310.
 Flycatcher, 539.
 Fossil mammals of Dakota and Nebraska, 397.
 Fossil plants, 310.
 Fowls, hybrid, 53.
 Fragaria, 437.
 Fragaria Gillmanii, 312.
 Fraxinus Americana, 353.
 Frog, nerve centres of, 250.
 Frost fish, 108.
 Fucus, 293.
 Fulix marila, 49.
 Fundulus multifasciatus, 195.
 Fungi, 337.
 Fungi, edible, 123.
 Fungi in insects, 241.
 Galeichthys, 694.
 Gallinago, 547.
 Gallinula martinica, 253.
 Gambetta, 547.
 Ganoid fishes, 127.
 Gar, 114.
 Gas in protoplasm, 379.
 Geese, 374.
 Gelasimus, 615.
 Geography of plants, 372.
 Geological change, 444.
 Geological survey of Iowa, 317.
 Geology, advances in, 449.
 Geology, dynamical, 639.
 Geology of Colorado, 119, 767, 768.
 Geology of Great Lakes, 133.
 Geology of Indiana, 372.
 Geology of Mississippi Valley, 193.
 Geology of New Hampshire, 567, 619.
 Geology of New Mexico, 119.
 Geology of North Carolina, 570.
 Geology of South Carolina, 571.
 Geology of the Missouri River, 41.
 Geology of Upper Missouri, 651, 767, 768.
 Geranium, 438.
 Germs, destroyed by boiling, 318.
 Gibraltar, bone caves of, 255.
 Gills, external, in Ganoid fishes, 127.
 Glacial Epoch at Equator, 566, 765.
 Glacial Period, 508.
 Glaciers, ancient 550, 560, 623, 765, 766, 767.
 Glyptemys insculpta, 53.
 Goniocotes Burnettii, 94.
 Goniocotes hologaster, 94.
 Goniodes stylifer, 97.
 Graculus, 371.
 Graculus idahensis, 311.
 Grape insect, 614.
 Grape oidium, 340.
 Grapholitha, 684.
 Grass, bur, 689.
 Grasses, fertilization of, 235.
 Gregarina, 380.
 Grinnellia, 292.
 Grus Haydeni, 311.
 Grystes, 694.
 Gymnogeomys, 299.
 Gymnostichum Hystrix, 354.
 Gyropus ovalis, 97.
 Haddock, 518.
 Hamatopinus vituli, 93.
 Hammon, 694.
 Halidrys silqua, 293.
 Halimeda, 285.
 Hamburya, 413.
 Hawk, 53, 74, 439, 537, 559, 759.
 Hearing, organs of, in insects, 127, 690.
 Hella, 229.
 Helianthus, 581.
 Heliothrips, 683.
 Helminthus, 543.
 Herninia, 229.
 Heron, 377, 559.
 Herring, 520.
 Hibernation of duck weed, 311.
 Hirundo horreorum, 127.
 Hololepis, 718.
 Homoptera edusa, 229.
 Hop, 406.
 Horse fly, 683.
 Hornbill, 763.
 Horse, fossil, 69.
 Hot springs of Humboldt Valley, 32.
 Hoya, 406.
 Humboldt Valley, 27.
 Humming bird, 497, 576.
 Hyalina cellaria, 169.
 Hyalonema, 17.
 Hylægnathus osmerinus, 117, 718.
 Hybrid Fowls, 53, 374, 375.
 Hybrid Rabbit, 375.
 Hydrodictyon utriculatum, 281.
 Hylomyzon, 113, 389.
 Hyperetis, 229.
 Hypotriechis, 537.
 Hypsilepsis, 103.
 Hypsilophodon, 103.
 Ichthyodectes, 635.
 Ichthyosaurus, 127.
 Idaho, fossils of, 647.
 Idothea, 404.
 Illinois, rare plants in, 374.
 Indiana, geology of, 372.
 Indian relic, 380.
 Indians of California, 129.
 Indian stone implements, 483.
 Inflorescence, androgynous, 355.
 Insecticide, 313.
 Insects, classification of, 363.
 Insects, dimorphism in, 617.
 Insects, fertilization of plants by, 242, 512.
 Insects, flight of, 439.
 Insects, fungi on, 241.
 Insects, injurious, 684.
 Insects, malformation in, 51.
 Insects, organs of hearing, 127.
 Insects, organs of smell, 127.
 Insects, sense organs of, 620.

- Insect parasite, 443.
 Iowa, geological survey of, 317.
 Iron sand, 539.
 Jager, pomarine, 253.
 Japanese sea weeds, 313.
 Kallima, 420.
 Kalnia latifolia, 373.
 King Crab, 498, 754.
 King-fish, 694.
 Kinglet, 376, 542.
 Kogia, 729, 735.
 Lakes, ancient, of Western America, 641.
 Lakes, great, geology of, 193.
 Lakes, marine animals in, 465.
 Lake Superior, ancient outlet of, 505.
 Lamprey, 719.
 Laornis Edwardsianus, 310.
 Larus, 371.
 Latex, circulation of, 317.
 Lathyrus, 418.
 Laurentian plants, 483.
 Lava ducts, 567.
 Lecanium, 686.
 Lemna, 311.
 Lepidum Virginicum, 237.
 Lepidodendron, 479.
 Lepidoptera, number of, 441.
 Lepidosteus osseus, 114.
 Leptus, 753.
 Lesbia, 712.
 Lessonia, 296.
 Lestris Pomarinus, 57, 253.
 Lichenine, 670.
 Lichens, 695, 729.
 Lichia, 633.
 Limbs, reproduction of, 376.
 Limax flavus, 167, 170.
 Limax maximus, 169, 170.
 Limpets, 561.
 Limulus, 257, 498, 754.
 Linden borer, 592.
 Lingula, 314, 494, 520.
 Lipeurus corvi, 95.
 Lipeurus elongatus, 95.
 Lipeurus gracilis, 95.
 Littorina litorea, 250.
 Loasa, 407.
 Loon, 369.
 Lophospermum, 409.
 Lota compressa, 251.
 Louse, 86.
 Lichen agrius, 343.
 Lycoperdon, 347.
 Lycopodites, 378.
 Lycosa, 664.
 Lyda, 685.
 Lyngbya, 283.
 Lynx, 395.
 Lyre bird, 321.
 Mackerel, 513.
 Macrocyatis, 296.
 Madreporaria, 488.
 Mallophaga, 85.
 Mammals, 502.
 Mammoth, 148, 457.
 Man, antiquity of, 453.
 Man, antiquity of, in North America, 40.
 Man, prehistoric, 453.
 Maple, 214.
 Marsh harrier, 377.
 Massachusetts, birds of, 365.
 Mastodon, 457.
 Mastrandia, 409.
 Megatherium, 763.
 Melagonium, 282.
 Melania, 250.
 Melanura linii, 107, 385, 388.
 Meleagris altus, 317.
 Melospiza, 371.
 Menura, 322.
 Mephitis bicolor, 376, 761.
 Mesoprius, 633.
 Mesoteras Kerriannus, 128.
 Mexican clover, 558.
 Mexico, New, salt plains in, 695.
 Michigan, geology of, 504.
 Michigan, iron ore, 504.
 Michigan, Lake, deep water fauna of, 403.
 Michigan, Lake, shore flora of, 356.
 Microleus repens, 283.
 Micropogon, 634.
 Micropteryx, 685.
 Microscope, 422, 445, 625, 626.
 Microscope, binocular, 573, 633, 695.
 Microscope objectives, 254.
 Micro-telescope, 574, 628.
 Mildew, 341.
 Minnow, 105, 107.
 Mississippi, delta of, 638.
 Mississippi Valley, geology of, 193.
 Missouri, fossil horse in, 60.
 Missouri, geology of, 651.
 Missouri, great mound in, 43.
 Missouri, lead mines of, 766.
 Missouri, quaternary deposits in, 61.
 Missouri river, geology of, 41.
 Molcanthus, 630.
 Moles, 761.
 Mollusks, 166.
 Monohammus, 594.
 Monstrosity in Trillium, 125.
 Monterey, animals of, 756.
 Montrose sandstone, 563, 639.
 Moose, 443, 535.
 Morrhua aglefinus, 517.
 Morrhua Americana, 116, 516.
 Mosasaurid reptile, 62.
 Mougeotia, 281.
 Mound builders, 40, 461.
 Moxostoma, 389.
 Moxostoma oblongum, 113.
 Mud sucker, 113.
 Mullet, 113.
 Muscles, striated, in mollusks, 691.
 Mussel climbing, 331.
 Myiodictes, 543.
 Myriapod, 621.
 Myrmecole, 765.
 Mysis, 404.
 Mytilus, 332.
 Nebraska, extinct mammals of, 307.
 Nereocystis, 296.
 Nevada, salt marsh in, 567.
 New England butterflies, 760.
 New Haven, geology of, 182.
 New Jersey, birds of, 536.
 New Jersey, fossil serpent from, 254.
 New Jersey, fresh water fishes of, 99, 117.
 New Mexico, geology of, 119.
 Nirmus thoracicus, 94.
 Nitophyllum, 292.
 North Carolina, geology of, 570.
 Noturus, 718.
 Nuthatch, 546.
 Nyctiardea, 550.
 Oaks, 183, 242.
 Oidium fructigenum, 341.
 Oidium Tuckeri, 340.
 Onoclea sandstone, 563, 639.
 Onoclea sensibilis, fossil, 237.
 Orarians, 433.
 Oregon, fossils of, 647.

- Orthagoriscus*, 629.
Osmerus mordax, 108.
 Osprey, 57.
Otolithus, 693.
 Pacific corals and polyps, 488.
Pedogenesis, 439.
Palaeotringa littoralis, 310.
Palaeotringa vetus, 310.
 Palm, 438, 559.
Pandion haliaetus, 57.
Panicum crus-galli, 43.
 Panther, 692.
 Parasites, 83.
Parthenogenesis, 440.
Passer domesticus, 54.
Passiflora, 417.
Paupopus, 621.
Pediculus, 86, 756.
 Pelasgie round tower, 8.
 Pelican, brown, 58.
 Pelican, rough-billed, 758.
Pencilium, 343, 350.
 Perch, 104.
 Peru. Primeval monuments of, 1.
 Peruvian archaeology, 443.
Phoronema Annae, 29.
 Phosphates, 571.
 Photography in Bofany, 45.
 Photography in Entomology, 45.
Phthirus, 85.
Phyllophora membranifolia, 290.
Phyllospora Menziesii, 294.
Physella, 623.
Physeter, 729.
 Pickle worm, 614.
Pieris rapae, 576, 612.
 Pinus, 45.
 Pipra, 714.
 Placenta, 56.
 Plants, 374.
 Plants, acclimatization of, 528.
 Plants, climbing, 405.
 Plants, color in, 312.
 Plants, earliest, 310.
 Plants, fasciation in, 511.
 Plants, fertilization of, by insects, 512.
 Plants, fertilization of, 46, 129.
 Plants, flowerless, 337.
 Plants, fossil, 237, 450, 647, 474.
 Plants, geography of, 372.
 Plants, nutrition of, 562.
 Plants, sex of, 562.
 Plants, vital force in, 312.
 Plasticity of rocks, 695.
Platysyllus, 443.
Plesiosaurus, 127.
 Podura scale, 572.
 Poisonous fungi, 340.
 Polistes, 440.
Polyporus, 337, 351.
 Polyps, 488.
Polypterus, 127.
Polysiphonia, 290.
 Polyzoa, 315.
 Pomarine Jaeger, 57.
Pomoxis hexacanthus, 102.
 Poplar borer, 593.
 Porphyra, 284.
 Post Tertiary, 504.
 Prairie dog, 376.
 Prairie flowers, 45.
 Prairies, flora of, 577.
 Prionus, 594.
Proctacanthus, 685.
 Protoplasma, gas in, 379.
Prototaxites, 481.
Psilophyton, 476.
Ptilota, 289.
Punctaria, 296.
 Puff ball, 347.
Puffinus Conradi, 311.
Pyrauga aestiva, 56.
 Quaternary deposits in Missouri, 61.
 Rabbit, hybrid, 375.
 Raspberry beetle, 685.
 Rat, albino, 376.
 Reason in animals, 51.
 Red bird, summer, 56.
 Redhead, 693.
Regma leboris, 375.
Regulus, 542.
 Reproduction of limbs, 376.
 Reptiles, 444.
 Reptiles, fossil, 562.
 Reptiles, mosasauroid, 62.
 Reptiles, skull of, 505.
Rhinoceros, 457.
Rhodomeia, 291.
Rhodomenia, 292.
Rhus, motion in leaves of, 689.
Richardsonia scabra, 558.
 Rissa, 369.
 Roach, 113.
 Robber fly, 686.
 Rocks, plasticity of, 695.
 Rodents, 58.
 Round Island, Fauna of, 314.
 Rust, 312.
Salmo, 396.
 Salt flats, 650.
 Salt lakes, 649.
 Salt marsh of Nevada, 567.
 Salt plains, 695.
 Salvia, fertilized by bees, 689.
 Sand piper, 297, 303, 547.
Saperda, 592.
Sargassum bacciferum, 294.
Sargus, 693.
Sarracenia, 45, 499.
Sauropsophus, 695.
Sauroidontia, 695.
Schinus, motion in leaves of, 689.
 Sciences, relation of physical to biological, 46.
Sciurus Carolinensis, 58.
Sciurus striatus, 249.
Scoleophagus, 546.
Scolithus, 62.
Scorphaenoidea Storerii, 52.
Scomber vernalis, 513.
 Sea colander, 255.
 Sea fans, 488.
 Sea leaf, 294.
 Seals, 675.
 Sea otter, 65.
 Sea pens, 488.
 Sea trout, 693.
 Sea weeds, 274.
 Sea weeds, use of, 313.
 Selection, natural, 419.
Semotilus corporalis, 110.
Semotilus rhotensis, 110.
 Sense organs in fly, 690.
 Sergeant fish, 394.
 Serpent, fossil, 254.
 Shad, 109, 115.
 Sheephead, 693.
 Shells of Florida, 586.
 Shrubs, native, 214.
 Sierra Nevada, 644.
Siciliaria, 489.
Silphium, 589.

- Simulium, 435.
 Sitta, 546.
 Skunk, 376.
 Smell, 375.
 Smell, in insects, 690.
 Smelt, 108.
 Smut, 342.
 Snakes, double-headed, 375.
 Snapper, 693.
 Snake, 547.
 Snow bird, 376.
 Solanum, 440.
 Solanum melongena, 45.
 Soundings, deep sea, 463.
 Sparrow, 378.
 Sparrow, house, 54.
 Species, variation of, 352.
 Spelerpes, 401.
 Spermatozoa involucre, 558.
 Sperm whales, 725.
 Sphaeria Robertii, 352.
 Sphenophorus, 686.
 Spiders, 622, 752.
 Spike horned deer, 442.
 Sponges, 17, 304.
 Squirrel, 249.
 Stamens, irritability of, 438.
 Staminal, 373.
 Sterna, 371.
 Stickleback, 115.
 Stilbe Americana, 112.
 Stone implements, 483.
 Strawberry, 312.
 Strix, 711.
 Stylopidae, 439.
 Sunfish, 102, 386, 629.
 Sunflower, 581.
 Swallow, 127.
 Tabanus, 686.
 Tamias striatus, 58.
 Tamas, 408.
 Tania, 288.
 Tasmanians, 380.
 Taxidermy, 365.
 Telmatomys affinis, 311.
 Telmatomys priscus, 311.
 Temnodon saltator, 519.
 Temperature of earth, 470.
 Terebratulid, 390.
 Tertiary age, 450, 765.
 Tertiary mammals of Dakota and Nebraska, 307.
 Tetragonops, 712.
 Tetraspora, 284.
 Thalassiophyllum, 294.
 Theloschistes, 667.
 Thrush, 540.
 Tinder, 337.
 Tortrix, 685.
 Toucan, 712.
 Toucan's beak, 622.
 Trees, large, 124.
 Trees, native, 214.
 Triassic reptiles, 562.
 Trichodectes capra, 96.
 Trichodectes subrostratus, 96.
 Trigloporus, 405.
 Trillium, 125, 472.
 Trillium erythrocarpum, 46.
 Trilobites, 501, 508.
 Troglodytes, 545.
 Trogon, 711.
 Tropaeolum, 408.
 Trout, 434.
 Trout eggs, impregnation of, 601.
 Truckee Valley, 27.
 Turdus, 540, 714.
 Turkey, fossil, 317.
 Turritella, 235.
 Turtle, sculptured, 53.
 Uddota, 285.
 Ulva, 283.
 Uredo, 342.
 Ursus, 431.
 Ustilago, 343, 350.
 Vanellus cristatus, 370.
 Variation, 392.
 Variations in plants, 472.
 Vegetation, primitive, 474.
 Vertebrata, 504.
 Vine dresser, 614.
 Viola, 438.
 Volcano, 118.
 Warbler, 543.
 Washington Eagle, 524.
 Washington territory, lava ducts of, 567.
 Whale, 128; Sperm, 725.
 White Mountains, ancient glaciers in, 550.
 White mountains, geology of, 567.
 Whiting, 694.
 Wisteria, 472.
 Wolfia, 639.
 Woodchuck, 252.
 Woodcock, 761.
 Woodpecker, redbellied, 538.
 Woodpecker, redheaded, 692.
 Worms, dimorphism in, 55.
 Wren, 545.
 Wren, ruby crowned, 316.
 Xema, 369.
 Xenos, 439.
 Xyleutes, 704.
 Yukon river, 431, 594.
 Yukon territory, 218.
 Zygaena, 281.

